What is the output of the following code?

java

Copy code

public class Test {

public static void main(String[] args) {

Object obj = new String("Hello");

if (obj instanceof String) {

System.out.println("String");

} else if (obj instanceof Integer) {

System.out.println("Integer");

} else {

System.out.println("Other");

}

}

}

a) "String"

b) "Integer"

c) "Other"

d) Compilation error

Answer: a) "String"

Which of the following statements about abstract classes in Java is false?

a) An abstract class can be instantiated.

b) An abstract class can have both abstract and non-abstract methods.

c) A class can extend only one abstract class.

d) An abstract class can have constructors.

Answer: a) An abstract class can be instantiated.

What is the output of the following code?

java

Copy code

public class Test {

public static void main(String[] args) {

int x = 10;

int y = x++ + ++x - x-- - --x;

System.out.println(y);

}

}

a) 10

b) 12

c) 14

d) 16

Answer: b) 12

In Java, which of the following is true about interfaces?

a) An interface can have instance variables.

b) A class can implement multiple interfaces with conflicting method signatures.

c) An interface can extend multiple interfaces.

d) An interface can have a private method.

Answer: b) A class can implement multiple interfaces with conflicting method signatures.

What is the output of the following code?

java

Copy code

public class Test {

public static void main(String[] args) {

String str = "Hello";

str.toUpperCase();

System.out.println(str);

}

}

a) "Hello"

b) "HELLO"

c) Compilation error

d) Runtime error

Answer: a) "Hello"

Which of the following is an example of composition in Java?

a) Inheriting from a superclass

b) Implementing an interface

c) Creating an object of one class inside another class

d) Using static methods and variables

Answer: c) Creating an object of one class inside another class

What is the output of the following code?

java

Copy code

public class Test {

public static void main(String[] args) {

StringBuilder sb1 = new StringBuilder("Hello");

StringBuilder sb2 = new StringBuilder("Hello");

System.out.println(sb1.equals(sb2));

}

}

a) true

b) false

c) Compilation error

d) Runtime error

Answer: b) false

Which of the following statements about static methods in Java is false?

a) Static methods can be overridden in subclasses.

b) Static methods can access only static variables and methods.

c) Static methods can be called using the class name, without creating an object.

d) Static methods are associated with the class, not with individual objects.

Answer: a) Static methods can be overridden in subclasses.

What is the output of the following code?

java

Copy code

public class Test {

private static int x = 5;

public static void main(String[] args) {

Test obj1 = new Test();

Test obj2 = new Test();

obj1.x = 10;

System.out.println(obj2.x);

}

}

a) 5

b) 10

c) Compilation error

d) Runtime error

Answer: b) 10

Which of the following is true about method overloading in Java?

a) Overloaded methods must have the same return type.

b) Overloaded methods must have the same number of parameters.

c) Overloaded methods can differ in the type and order of parameters.

d) Overloaded methods can differ only in their access modifiers.

Answer: c) Overloaded methods can differ in the type and order of parameters.

What is the output of the following code?

java

Copy code

public class Test {

public static void main(String[] args) {

int x = 5;

System.out.println(x > 2 ? x < 4 ? 10 : 8 : 7);

}

}

a) 5

b) 8

c) 7

d) Compilation error

Answer: c) 7

Which of the following is an example of a checked exception in Java?

a) NullPointerException

b) ArrayIndexOutOfBoundsException

c) IllegalArgumentException

d) IOException

Answer: d) IOException

What is the output of the following code?

java

Copy code

public class Test {

public static void main(String[] args) {

int x = 5;

System.out.println(x << 2);

}

}

a) 5

b) 10

c) 20

d) Compilation error

Answer: c) 20

In Java, an anonymous inner class:

a) Has no name and cannot have constructors.

b) Can be declared as a top-level class.

c) Cannot extend a class and implement an interface at the same time.

d) Cannot access variables from the enclosing scope.

Answer: a) Has no name and cannot have constructors.

What is the output of the following code?

java

Copy code

public class Test {

public static void main(String[] args) {

String str = "Hello";

System.out.println(str.substring(0, 2));

}

}

a) "Hello"

b) "Hel"

c) "He"

d) "H"

Answer: c) "He"

What is the output of the following code?

java

Copy code

public class Test {

public static void main(String[] args) {

int[][] matrix = {{1, 2}, {3, 4}};

System.out.println(matrix[1][0]);

}

}

a) 1

b) 2

c) 3

d) 4

Answer: c) 3

Which of the following statements about Java constructors is true?

a) A constructor can have a return type.

b) A constructor can be private.

c) A constructor can be inherited by subclasses.

d) A class can have multiple constructors with the same parameters.

Answer: b) A constructor can be private.

What is the output of the following code?

java

Copy code

public class Test {

public static void main(String[] args) {

int x = 5;

System.out.println(x++);

System.out.println(++x);

}

}

a) 5 6

b) 6 6

c) 5 7

d) 6 7

Answer: a) 5 6

Which of the following statements about the super keyword in Java is true?

a) The super keyword is used to access static members of the superclass.

b) The super keyword can be used to invoke the superclass constructor.

c) The super keyword can be used to override a method in the superclass.

d) The super keyword is used to create a new instance of the subclass.

Answer: b) The super keyword can be used to invoke the superclass constructor.

What is the output of the following code?

java

Copy code

public class Test {

public static void main(String[] args) {

String str = "Hello";

str.replace("l", "L");

System.out.println(str);

}

}

a) "Hello"

b) "HelLo"

c) "HeLLo"

d) Compilation error

Answer: a) "Hello"